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EXAMINER	
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ART UNIT	**PAPER NUMBER**
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/774,561	PARK ET AL.	
	Examiner	Art Unit	
	Willie J. Daniel, Jr.	2617	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *31 October 2007*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-19,27-34 and 46-57* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-19,27-34 and 46-57* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

1. This action is in response to applicant's amendment filed on 31 October 2007. **Claims 1-19, 27-34, and 46-57** are now pending in the present application and **claims 20-26 and claims 35-45** are canceled. This office action is made **Non-Final**.

Continued Examination Under 37 CFR 1.114

2. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 31 October 2007 has been entered.

Information Disclosure Statement

3. The information disclosure statement (IDS) submitted on

   a. 08 January 2008

   is in compliance with the provisions of 37 CFR 1.97 and is being considered by the examiner.

Claim Rejections - 35 USC § 102

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-3, 5-19, 27-34, 46-53, and 56-57 are rejected under 35 U.S.C. 102(b) as being anticipated by **Sanmugam (US 5,533,094)**.

Regarding **claim 1**, Sanmugam discloses a communications (see col. 4, lines 56-64; Figs. 1, 9) method, the method comprising:

operating an access node (e.g., BS 256) to receive a data message (e.g., page requests) directed to a mobile station (M1) which reads on the claimed "end node" (see col. 13, lines 1-32; col. 7, lines 8-15; col. 8, line 1-9; col. 9, line 2; Figs. 9 & 8A-B), where page requests are based on paging information such as class of service, paging parameters, paging field, paging characteristics, and paging extent; and

operating the access node (e.g., 256) to determine from said received paging requirement using packet classification based on a header field included in said data message (see col. 13, lines 1-32; col. 7, lines 8-15; col. 8, line 1-9; col. 9, line 2; Figs. 9 & 8A-B), where page requests are based on paging information such as class of service, paging parameters, paging field, paging characteristics, and paging extent in which a header field would be inherent due to paging information of the paging requests as evidenced by the fact that one of ordinary skill in the art would clearly recognize. In addition, paging orders are transmitted towards the base station (e.g., 256) and places the page message(s) in buffers of the base stations in

which the page message(s) are transmitted according to paging priorities (see col. 12, lines 29-40), where the base station (e.g., 256) determines what the paging priorities are in order to allocate resources to distribute the paging messages appropriately.

Regarding **claim 2**, Sanmugam discloses the method of claim 1,

wherein said paging requirement is determined as a function of at least one of a quality of service indicator, a type indicator, a source indicator, and a destination indicator (see col. 13, lines 1-32; col. 7, lines 8-15; col. 8, line 1-9; col. 9, line 2; Figs. 9, 8A-B), where page requests are based on paging information such as class of service, paging parameters, paging field, paging characteristics, and paging extent; and

wherein said access node (256) is a base station (256), further comprising:

operating said access node (e.g., 256) to allocate a paging transmission resource for transmitting a page as a function of the determined paging requirement (see col. 13, lines 1-32; col. 7, lines 8-15; col. 8, line 1-9; col. 10, lines 53-56; Figs. 9, 8A-B)

at least some of said plurality of paging requests having different determined paging requirements resulting in different allocation of access node resources (see col. 8, lines 1-11,30-34; col. 7, lines 8-15; col. 10, lines 53-56; Figs. 9, 2-3), where the system allocates paging capacity.

Regarding **claim 3**, Sanmugam discloses the method of claim 2, further comprising: operating said access node (256) to transmit a page over a wireless communications link (channel) using the allocated paging transmission resource (see col. 13, lines 1-32; col. 7, lines 8-15; col. 8, line 1-9; col. 10, lines 53-56; Figs. 9, 8A-B).

Regarding **claim 5**, Sanmugam discloses the method of claim 2, further comprising:

operating said access node (e.g., 256) to communicate a paging signal to a second node (e.g., base station 256), indicating allocation of a paging transmission resource for use in transmitting a page corresponding to said received data message (see col. 13, lines 14-27; col. 8, line 1-9; col. 2, lines 51-59; col. 10, lines 53-56; Figs. 9, 8B "ref. 206"), where the paging of the mobile station can be transmitted between exchanges as well as expanded to include a larger area which encompasses transmitting a page between nodes such as multiple BS (256) and MSC (254) (see col. 6, lines 28-43,52-62). As a note, mobile station (M1) can roam from one cell to another cell (see col. 5, lines 19-27) and the last known cell or base station may attempt to page the mobile station (M1) (see col. 6, lines 34-43), where the first base station (256) provides no response (or negative acknowledgement NACK) in which the system (e.g., via a MSC 254) according to the NACK message from the first base station (256) initiates further paging to a second base station (256) in a larger area of the cellular system.

Regarding **claim 6**, Sanmugam discloses the method of claim 1, further comprising:

operating said access node (256) to communicate said determined paging requirement to a second node (e.g., 256) in a paging request message (see col. 13, lines 14-27; Figs. 9, 8A-B), where the paging of the mobile station can be transmitted between exchanges as well as expanded to include a larger area which encompasses transmitting a page between nodes such as multiple BS (256) and MSC (254) (see col. 6, lines 28-43,52-62).

Regarding **claim 7**, Sanmugam discloses the method of claim 6, wherein said page request message includes at least a portion of said received paging information (see col. 11,

lines 47-55; col. 8, lines 24-25; col. 8, line 45 - col. 9, line 4; col. 10, lines 31-56; Figs. 3-6, 8A "ref. 192", 8B).

Regarding **claim 8**, Sanmugam discloses the method of claim 7, wherein said determined paging requirement, indicated in said paging request message, is that said portion be included in a page (see col. 11, lines 47-55; col. 8, lines 24-25; col. 8, line 45 - col. 9, line 4; col. 10, lines 31-56; Figs. 3-6, 8A-B).

Regarding **claim 9**, Sanmugam discloses the method of claim 6, wherein said determined paging requirement, indicated in said paging request message, is that a page be acknowledged (e.g., page response) (see col. 13, lines 43-48; col. 9, line 2; col. 10, lines 8-11; col. 6, lines 28-34; col. 11, lines10-30; Fig. 10A "ref. 310").

Regarding **claim 10**, Sanmugam discloses the method of claim 6, wherein said determined paging requirement, indicated in said paging request message, is a quality of service (e.g., class of service) (see col. 11, lines 47-55; col. 8, lines 24-25; col. 8, line 45 - col. 9, line 4; col. 10, lines 31-56; col. 7, lines 8-15; Figs. 3-6, 8A-B).

Regarding **claim 11**, Sanmugam discloses the method of claim 10, wherein said quality of service includes a page transmission timing constraint (e.g., priority) (see col. 12, lines 12-18,31-40; Fig. 8B "ref. 212").

Regarding **claim 12**, Sanmugam discloses the method of claim 10, wherein said quality of service is one of a plurality of levels (see col. 7, lines 8-21; col. 8, lines 10-25,45-64; col. 9, lines 59-62,8-18).

Regarding **claim 13**, Sanmugam discloses the method of claim 10, wherein said quality of service requires that a page be transmitted multiple times (see col. 9, lines 41-49;

col. 9, line 65 - col. 10, line 3; Figs. 5-6, 7 "ref. 160, 164", 8B "ref. 218"), where the multiple page attempts are based on the page characteristics such as the paging extent.

Regarding **claim 14**, Sanmugam discloses the method of claim 10, wherein said quality of service requires retransmission of a page at least once in the absence of an acknowledgment (see col. 10, lines 8-11; col. 6, lines 28-34; col. 11, lines 10-30; Figs. 5, 7, 8B).

Regarding **claim 15**, Sanmugam discloses the method of claim 14, further comprising:

operating the second node (e.g., 256) to cause said retransmission of said page to be into a geographic area larger than an initial transmission area of said page (see col. 6, lines 28-40; Figs. 2, 5, 9), where the system retransmits the page according to the location area, paging area, and/or service area.

Regarding **claim 16**, Sanmugam discloses the method of claim 6, wherein said determined paging requirement, indicated in said paging request message, is a quality of service level (see col. 11, lines 47-55; col. 8, lines 24-25; col. 8, line 45 - col. 9, line 4; col. 10, lines 31-56; Figs. 3-6, 8A-B, 9); and

wherein said paging request message includes paging resource allocation information indicating a fraction of a paging resource to be allocated by said second node (e.g., 256) to pages having said quality of service level (see col. 8, lines 1-11,30-34; col. 7, lines 8-15; col. 10, lines 53-56; Figs. 9, 2-3), the method further comprising:

operating the second node (e.g., 256) to allocate said fraction of said paging resource to pages having a quality of service level indicated in said paging request message (see col. 8, lines 1-11,30-34; col. 7, lines 8-15; col. 10, lines 53-56; Figs. 9, 2-3).

Regarding **claim 17**, Sanmugam discloses the method of claim 6, further comprising: operating said second node (e.g., 256) to allocate a paging transmission resource for transmitting a page, as a function of said determined paging requirement, indicated in said paging request message (see col. 8, lines 1-11,30-34; col. 7, lines 8-15; col. 10, lines 53-56; Figs. 9, 1-3).

Regarding **claim 18**, Sanmugam discloses the method of claim 17, further comprising:

operating said second node (e.g., 256) to transmit a page using the allocated paging transmission resource (see col. 8, lines 1-11,30-34; col. 7, lines 8-15; col. 10, lines 53-56; col. 6, lines 52-65; Figs. 9, 1-3).

Regarding **claim 19**, Sanmugam discloses the method of claim 17, further comprising:

operating said second node (e.g., 254) to communicate a paging signal to a third node (e.g., 256), indicating allocation of a paging transmission resource for use in transmitting a page corresponding to said paging information (see col. 8, lines 1-11,30-34; col. 7, lines 8-15; col. 10, lines 53-56; col. 6, lines 52-65; Figs. 9, 1-3), where the paging of the mobile station can be transmitted between exchanges as well as expanded to include a larger area which encompasses transmitting a page between nodes such as multiple BS (256) and MSC (254) (see col. 6, lines 28-43). As a note, mobile station (M1) can roam from one cell to

another cell (see col. 5, lines 19-27) and the last known cell or base station may attempt to page the mobile station (M1) (see col. 6, lines 34-43), where the first base station (256) provides no response (or negative acknowledgement NACK) in which the system (e.g., via a MSC 254) according to the NACK message from the first base station (256) initiates further paging to a second base station (256) in a larger area of the cellular system.

Regarding **claim 27**, Sanmugam discloses a communications system (see col. 4, line 56 - col. 5, line 45; Figs. 1, 9) comprising:

a base station (e.g., 256) including:

i) means (e.g., 256) for receiving a data message (e.g., page requests) directed to an end node (e.g., mobile station M1) (see col. 5, lines 40-45; col. 4, line 66 - col. 5, line 13; col. 13, lines 1-32; col. 7, lines 8-15; col. 8, line 1-9; col. 9, line 2; Figs. 9, 1, 8A-B), where the page request message includes an identification number bit (see col. 12, lines 33-36); and

ii) means (e.g., 256) for determining a paging requirement using packet classification based on a header field included in said data message, said paging requirement being determined as a function of at least one of a quality of service indicator (e.g., class of service), a type indicator, a source indicator, and a destination indicator (see col. 5, lines 40-45; col. 4, line 66 - col. 5, line 13; col. 13, lines 1-32; col. 7, lines 8-15; col. 8, line 1-9; col. 9, line 2; Figs. 9, 1, 8A-B), where page requests are based on paging information such as class of service, paging parameters, paging field, paging characteristics, and paging extent in which a header field would be inherent due to paging information of the paging requests as evidenced by the fact that one of ordinary skill in the art would clearly recognize.

Regarding **claim 28**, Sanmugam discloses the system of claim 27, wherein said base station (e.g., 256), further comprises:

means (e.g., 256) for allocating a paging transmission resource for transmitting a page as a function of a determined paging requirement (see col. 5, lines 40-45; col. 10, lines 53-56; col. 13, lines 1-32; col. 7, lines 8-15; col. 8, line 1-9; Figs. 9, 1, 8A-B).

Regarding **claim 29**, Sanmugam discloses the system of claim 28, wherein said base station further includes a radio transmitter (e.g., 254) for transmitting a page using the allocated paging transmission resource (see col. 5, lines 40-45; col. 13, lines 1-32; col. 7, lines 8-15; col. 8, line 1-9; col. 10, lines 53-56; Figs. 9, 1, 8A-B).

Regarding **claim 30**, Sanmugam discloses the system of claim 29, wherein said base station (e.g., 256) further includes:

means (e.g., 256) for generating a paging request message including information indicating said determined paging requirement (see col. 6, lines 52-65; col. 13, lines 1-32; Figs. 3, 9, 8A-B); and

means (e.g., 256) for transmitting said paging request message to another node (e.g., 256) (see col. 6, lines 52-65; col. 13, lines 1-32; Figs. 3, 9, 8A-B), where the paging of the mobile station can be transmitted between exchanges as well as expanded to include a larger area which encompasses transmitting a page between nodes such as multiple BS (256) and MSC (254) (see col. 6, lines 28-43,52-62). .

Regarding **claim 31**, Sanmugam discloses the system of claim 30, wherein said paging request message includes at least a portion of said received data message and wherein said determined paging requirement, indicated in said paging request message, is that said

portion be included in a page (see col. 11, lines 47-55; col. 8, lines 24-25; col. 8, line 45 - col. 9, line 4; col. 10, lines 31-56; Figs. 3-6, 8A-9).

Regarding **claim 32**, Sanmugam discloses the system of claim 30, wherein said determined paging requirement, indicated in said paging request message, is that a page be acknowledged (e.g., page response) (see col. 13, lines 43-48; col. 9, line 2; col. 10, lines 8-11; col. 6, lines 28-34; col. 11, lines10-30; Fig. 10A "ref. 310").

Regarding **claim 33**, Sanmugam discloses the system of claim 30, wherein said determined paging requirement, indicated in said paging request message, is a quality of service (e.g., class of service) requirement (see col. 11, lines 47-55; col. 8, lines 24-25; col. 8, line 45 - col. 9, line 4; col. 10, lines 31-56; col. 7, lines 8-15; Figs. 3-6, 8A-B).

Regarding **claim 34**, Sanmugam discloses the system of claim 30, further comprising:

a second node (e.g., 256), said second node including:

i) means (e.g., receiver) for receiving said paging request message (see col. 4, line 66 - col. 5, line 13; col. 6, lines 52-65; col. 13, lines 1-32; Figs. 9, 1, 7-8B);

ii) means (e.g., controller) for allocating at least one paging resource as a function of paging requirement information included in a received paging request message (see col. 4, line 66 - col. 5, line 13; col. 10, lines 53-56; col. 13, lines 1-32; col. 6, lines 52-65; Figs. 9, 1, 7-8B); and

iii) means (e.g., transmitter) for transmitting a page to a mobile node using the at least one allocated paging resource (see col. 4, line 66 - col. 5, line 13; col. 13, lines 1-32; col. 6, lines 52-65; Figs. 9, 1, 7-8B).

Regarding **claim 46**, Sanmugam discloses a base station (e.g., 256) (see col. 4, line 64 - col. 5, line 13; Figs. 1 and 9) comprising:

a receiver module (e.g., 256) for receiving a data message (e.g., page requests) directed to an end node (e.g., mobile station M1) (see col. 5, lines 40-45; col. 4, line 66 - col. 5, line 13; col. 13, lines 1-32; col. 7, lines 8-15; col. 8, line 1-9; col. 9, line 2; Figs. 9, 1, and 8A-B), where the page request message includes an identification number bit (see col. 12, lines 33-36); and

a paging requirement determination module (e.g., 256) for determining a paging requirement through the use of packet classification based on a header field included in said data message, said paging requirement being determined as a function of at least one of a quality of service indicator (e.g., class of service or priority), a type indicator, a source indicator, and a destination indicator (see col. 5, lines 40-45; col. 4, line 66 - col. 5, line 13; col. 13, lines 1-32; col. 6, lines 62-65; col. 7, lines 8-15; col. 8, line 1-9; col. 9, line 2; Figs. 9, 1, and 8A-B), where page requests are based on paging information such as class of service, paging parameters, paging field, paging characteristics, and paging extent in which a header field would be inherent due to paging information of the paging requests as evidenced by the fact that one of ordinary skill in the art would clearly recognize.

Regarding **claim 47**, Sanmugam discloses the base station (e.g., 256) of claim 46, further comprising:

a resource allocation module (e.g., 256) for allocating a paging transmission resource for transmitting a page as a function of a determined paging requirement (see col. 4, line 64 - col.

5, line 13; col. 5, lines 40-45; col. 10, lines 53-56; col. 13, lines 1-32; col. 7, lines 8-15; col. 8, line 1-9; Figs. 9, 1, and 8A-B).

Regarding **claim 48**, Sanmugam discloses the base station of claim 47, further comprising:

a radio transmitter for transmitting a page using the allocated paging transmission resource (see col. 4, line 64 - col. 5, line 13; col. 5, lines 40-45; col. 13, lines 1-32; col. 7, lines 8-15; col. 8, line 1-9; col. 10, lines 53-56; Figs. 9, 1, and 8A-B).

Regarding **claim 49**, Sanmugam discloses a machine readable medium embodying machine executable instructions for controlling a base station (e.g., 256) to implement a method (see col. 4, line 64 - col. 5, line 13; Figs. 1 and 9), the method comprising:

receive a data message (e.g., page requests) directed to an end node (e.g., mobile station M1) (see col. 13, lines 1-32; col. 7, lines 8-15; col. 8, line 1-9; col. 9, line 2; Figs. 9, 8A-B), where page requests are based on paging information such as class of service, paging parameters, paging field, paging characteristics, and paging extent; and

operating the access node (e.g., 256) to determine a paging requirement using packet classification based on a header field included in said data message (see col. 13, lines 1-32; col. 7, lines 8-15; col. 8, line 1-9; col. 9, line 2; Figs. 9, 8A-B), where page requests are based on paging information such as class of service, paging parameters, paging field, paging characteristics, and paging extent in which a header field would be inherent due to paging information of the paging requests as evidenced by the fact that one of ordinary skill in the art would clearly recognize.

Regarding **claim 50**, Sanmugam discloses the machine readable medium of claim 49, wherein said paging requirement is determined as a function of at least one of a quality of service indicator (e.g., class of service or priority), a type indicator, a source indicator, and a destination indicator (see col. 13, lines 1-32; col. 6, lines 62-65; col. 7, lines 8-15; col. 8, line 1-9; col. 9, line 2; Figs. 9, 8A-B), where page requests are based on paging information such as class of service, paging parameters, paging field, paging characteristics, and paging extent; and

wherein machine readable medium further embodies machine executable instructions for controlling a base station (e.g., 256) to perform the step of:

allocating a paging transmission resource for transmitting a page as a function of the determined paging requirement, at least some of said plurality of paging requests having different determined paging requirements resulting in different allocation of access node resources (see col. 13, lines 1-32; col. 7, lines 8-15; col. 8, line 1-11,30-34; col. 10, lines 53-56; Figs. 9, 8A-B), where the system allocates paging capacity .

Regarding **claim 51**, Sanmugam discloses the machine readable medium of claim 50, further embodying machine executable instructions for controlling a base station to perform the step of:

transmitting a page over a wireless communications link (channel) using the allocated paging transmission resource (see col. 13, lines 1-32; col. 7, lines 8-15; col. 8, line 1-9; col. 10, lines 53-56; Figs. 9, 8A-B).

Regarding **claim 52**, Sanmugam discloses the method of claim 1, operating the access node to determine a paging requirement using packet classification based on a header field

included in said data message (see col. 13, lines 1-32; col. 7, lines 8-15; col. 8, line 1-9; col. 9, line 2; Figs. 9, 8A-B), where page requests are based on paging information such as class of service, paging parameters, paging field, paging characteristics, and paging extent:

matching IP datagrams to specific paging requirements (see col. 13, lines 1-32; col. 7, lines 8-15; col. 8, line 1-9; col. 9, line 2; Figs. 9, 8A-B), where page requests are based on paging information such as class of service, paging parameters, paging field, paging characteristics, and paging extent.

Regarding **claim 53**, Sanmugam discloses the method of claim 1, further comprising:

storing paging requirement match criteria information in said access node in conjunction with and corresponding paging requirements information (see col. 12, lines 29-40); and

wherein operating the access node to determine a paging requirement using packet classification based on a header field included in said data message includes (see col. 12, lines 29-40):

using said stored paging requirement match criteria to determine a paging requirement corresponding to said data message (see col. 12, lines 29-40), where the base station (e.g., 256) distribute messages according to parameters such as paging priorities in which storing paging requirement match criteria information would be inherent for the base station to distribute the messages based on parameters as evidenced by the fact that one of ordinary skill in the art would clearly recognize. In addition, paging orders are transmitted towards the base station (e.g., 256) and places the page message(s) in buffers of the base stations in which the page message(s) are transmitted according to paging priorities (see col. 12, lines

29-40), where the base station (e.g., 256) determines what the paging priorities are in order to allocate resources to distribute the paging messages appropriately.

Regarding **claim 56**, the claim is rejected for the same reasons as set forth above in the rejections of claims 46 and 49.

Regarding **claim 57**, the claim is rejected for the same reasons as set forth above in the rejection of claim 5.

Claims 1, 27, 46, 49, and 56 are rejected under 35 U.S.C. 102(b) as being anticipated by **Miah et al.** (hereinafter Miah) (**EP 1217855 A1**).

Regarding **claim 1**, Miah discloses a communications method (see Fig. 1), the method comprising:

operating an access node to receive a data message (e.g., paging message) directed to an end node (e.g., mobile phone 2) (see col. 2, [0012, 0015]); and

operating the access node to determine a paging requirement using packet classification based on a header field included in said data message (see col. 2, [0012]; col. 2-3, [0016-0017]).

Regarding **claim 27**, Miah discloses a communications system (see Fig. 1) comprising:

a base station (see Fig. 1) including:

i) means for receiving a data message (e.g., paging message) directed to an end node (e.g., mobile phone 2) (see col. 2, [0012, 0015]); and

ii) means for determining a paging requirement using packet classification based on a header field included in said data message, said paging requirement being determined as a function of at least one of a quality of service indicator (e.g., priority), a type indicator, a source indicator, and a destination indicator (see col. 2, [0012]; col. 2-3, [0016-0017]).

Regarding **claim 46**, Miah discloses a base station (see Fig. 1) comprising:

a receiver module for receiving a data message (e.g., paging message) directed to an end node (e.g., mobile phone 2) (see col. 2, [0012, 0015]); and

a paging requirement determination module for determining a paging requirement through the use of packet classification based on a header field included in said data message, said paging requirement being determined as a function of at least one of a quality of service indicator (e.g., priority), a type indicator, a source indicator, and a destination indicator (see col. 2, [0012]; col. 2-3, [0016-0017]).

Regarding **claim 49**, Miah discloses a machine readable medium embodying machine executable instructions for controlling a base station (see Fig. 1) to implement a method, the method comprising:

receiving a data message (e.g., paging message) directed to an end node (e.g., mobile phone 2) (see col. 2, [0012, 0015]); and

determining a paging requirement using packet classification based on a header field included in said data message (see col. 2, [0012]; col. 2-3, [0016-0017]).

Regarding **claim 56**, the claim is rejected for the same reasons as set forth above in the rejections of claims 46 and 49.

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claim 4 is rejected under 35 U.S.C. 103(a) as being unpatentable over Sanmugam (US 5,533,094) in view of Weber et al. (hereinafter Weber) (US 6,314,282 B1).

Regarding **claim 4**, Sanmugam discloses every limitation claimed as applied above in claim 1. Sanmugam does not specifically disclose having the feature wherein said step of transmitting a page includes incorporating, into said page, information indicating a state of device operation in which a device to which said page is directed is to operate after receiving said page. However, the examiner maintains that the feature wherein said step of transmitting a page includes incorporating, into said page, information indicating a state of device operation in which a device to which said page is directed is to operate after receiving said page was well known in the art, as taught by Weber.

In the same field of endeavor, Weber discloses the feature wherein said step of transmitting a page includes incorporating into page information indicating a state of device operation, in which a mobile terminal (7) which reads on the claimed "device" to which said page is directed, is to operate after receiving said page (see col. 5, lines 40-49,3-22; col. 6, lines 13-20; Figs. 3, 5).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teachings of Sanmugam and Weber to have the

feature wherein said step of transmitting a page includes incorporating, into said page, information indicating a state of device operation in which a device to which said page is directed is to operate after receiving said page, in order to provide mode change information that will automatically change the mode of a mobile terminal, as taught by Weber (see col. 2, lines 9-13, 65-67).

Claims 54-55 are rejected under 35 U.S.C. 103(a) as being unpatentable over **Sanmugam (US 5,533,094)** in view of **Palat et al.** (hereinafter Palat) **(US 6,765,890 B1)**.

Regarding **claim 54**, Sanmugam discloses every limitation claimed as applied above in claim 46. Sanmugam does not specifically disclose having the feature(s) the base station of claim 46, wherein said base station wherein said paging requirement determination module includes: a monitoring agent for determining if a page should be initiated to a dormant end node; a tracking agent for receiving location update signals used to track the location of end nodes; and an anchor paging agent that coordinates page request signaling for dormant end nodes. However, the examiner maintains that the feature(s) the base station of claim 46, wherein said base station wherein said paging requirement determination module includes: a monitoring agent for determining if a page should be initiated to a dormant end node; a tracking agent for receiving location update signals used to track the location of end nodes; and an anchor paging agent that coordinates page request signaling for dormant end nodes was well known in the art, as taught by Palat.

In the same field of endeavor, Palat discloses the feature(s) the base station of claim 46, wherein said base station wherein said paging requirement determination module includes:

a monitoring agent for determining if a page should be initiated to a dormant end node (see col. 4, lines 11-19; col. 5, lines 17-26; col. 6, lines 4-20,44-51);

a tracking agent for receiving location update signals used to track the location of end nodes see col. 4, lines 11-19; col. 5, lines 17-26; col. 6, lines 4-20,44-51); and

an anchor paging agent that coordinates page request signaling for dormant end nodes see col. 4, lines 11-19; col. 5, lines 17-26; col. 6, lines 4-20,44-51) .

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teachings of Sanmugam and Palat to have the feature(s) the base station of claim 46, wherein said base station wherein said paging requirement determination module includes: a monitoring agent for determining if a page should be initiated to a dormant end node; a tracking agent for receiving location update signals used to track the location of end nodes; and an anchor paging agent that coordinates page request signaling for dormant end nodes, in order to provide an implementation that performs a routing area update as a mobile terminal moves between radio access system coverage areas, as taught by Palat (see col. 2, lines 11-15).

Regarding **claim 55**, Sanmugam discloses every limitation claimed as applied above in claim 54. Sanmugam does not specifically disclose having the feature(s) a local paging agent for coordinating signaling between said paging requirement determination module of said base station and other base stations. However, the examiner maintains that the feature(s)

a local paging agent for coordinating signaling between said paging requirement determination module of said base station and other base stations was well known in the art, as taught by Palat.

In the same field of endeavor, Palat discloses the feature(s) a local paging agent for coordinating signaling between said paging requirement determination module of said base station and other base stations (see col. 2, lines 24-45), where the second radio access system is paged.

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teachings of Sanmugam and Palat to have the feature(s) a local paging agent for coordinating signaling between said paging requirement determination module of said base station and other base stations, in order to provide an implementation that performs a routing area update as a mobile terminal moves between radio access system coverage areas, as taught by Palat (see col. 2, lines 11-15).

Response to Arguments

6. Applicant's arguments with respect to claims 1-19, 27-34, and 46-57 have been considered but are moot in view of the new ground(s) of rejection necessitated by the new claims.

In response to applicant's arguments, the Examiner respectfully disagrees as the applied reference(s) provide more than adequate support and to further clarify (see the above claims for relevant citations and comments in this section).

7. The Examiner requests applicant to provide support (e.g., page(s), line(s), and drawing(s) as well as comments) for the new and/or amended claim language and any further amended claim language.

Conclusion

8. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

   a. Heinonen et al. (US 6,990,316 B2) discloses a short range RF network configuration.

   b. Haumont (US 2004/0102199 A1) discloses a paging area having multiple technologies.

   c. Östrup et al. (US 6,731,944 B1) discloses an apparatus and method for automatically controlling the forwarding of low priority page requests.

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Willie J. Daniel, Jr. whose telephone number is (571) 272-7907. The examiner can normally be reached on 8:30-4:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Charles Appiah can be reached on (571) 272-7904. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/WJD,JR/

WJD,JR
21 January 2008

CHARLES N. APPIAH
SUPERVISORY PATENT EXAMINER